

Amendments to the Specification:

Please replace paragraph [0024] with the following amended paragraph:

[0024] As a second example of the preceding, assume that system 10 is implemented for an application wherein the user is expected to provide a gain index GI that may correspond anywhere from 0 dB to 18 dB, but with a granularity of 3.0 dB. In this case, again the highest dB value requested by input is 18 dB, which thereby sets the upper bound in the range $\{x-6.02*\text{granularity} : x\}$. However, due to the larger granularity, the total range is $\{18-6.02+3.0 : 18\}$ dB, which using rounding provides a range of $\{15 : 18\}$ dB. Also due to the larger granularity, fewer tabled values are stored, where here the number is $6/\text{GR}=6/3=2$. Thus, in this case, only two tabled linear gain values are stored in memory 16, as shown in the following Table 6.

dB	linear gain
5.0 15.0	5.6234
18.0	7.9433

Table 6

From only the two values in Table 6 and for a granularity of three, the linear gain of any other dB value for a gain index GI from 0 dB to 18 dB can be determined, according to the principles described above. For example, for a gain index GI requesting a linear gain for a value of 12.0 dB, then this value is $(N=1)*6.02$ dB less than 18.0 dB (rounding to the first decimal), which has a tabled linear gain of 7.9433. Thus, the preferred embodiment determines the linear gain for 12.0 dB by multiplying the linear gain for 18.0 dB by 2^{-1} , which again can be accomplished in a binary fashion by right shifting once the tabled linear gain 7.9433, corresponding to 18.0 dB. The result approximates a linear gain equal to $(2^{-1} * 7.9433) = 3.9717$. As another example, for a gain index GI requesting a linear gain for a value of 3.0 dB, this dB value is $(N=2)*6.02$ dB less than 15.0 dB (rounding to the first decimal), which has a tabled linear gain of 5.6234. Thus, the preferred embodiment determines the linear gain for 3.0 dB by multiplying the linear gain, 5.6234 for 15.0 dB by 2^{-2} , which can be accomplished in a binary fashion by right shifting twice the tabled linear gain corresponding to 15.0 dB. The result approximates $(2^{-1} * 5.6234) = 1.4059$. Other examples will be appreciated by one skilled in the art.